

AMENDMENTS TO THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) An electronic circuit for bidirectional conversion of a high input voltage to a direct-current output voltage with indirect coupling, comprising:

a resonance circuit including a common transformer and a capacitor array,
the a primary converter;

a common transformer including a plurality of primary windings and a single secondary winding; and

a single secondary converter connected to the single secondary winding; and

~~wherein the a primary converter includes~~ including at least three primary converter sections connected in series, ~~wherein~~ output lines of each of the at least three primary converter sections ~~are being~~ connected to a respective one of the plurality of primary windings of the common transformer, ~~and wherein each primary winding of the common transformer is being~~ allocated one resonance capacitor, the series resonance capacitors forming an oscillating circuit with a leakage inductance coil of the common transformer,

wherein the capacitor array includes a symmetrical magnetic and electric structure for lossless switching operation, and wherein the transformer, the capacitor array, and a respective resonance frequency and switching frequency are selected such that each of the primary converter sections are decoupled, and wherein for a resonance frequency, a ratio of impedances of the leakage inductance coil to the capacitor array is chosen so that an effective value of an alternating voltage of at least one of the capacitors in nominal operation is at least 1/3 of a no-load voltage of a transformer of a primary winding.

2. (Previously Presented) The electronic circuit of claim 1, wherein the at least three primary converter sections each include one input four-quadrant regulator, at least one intermediate circuit capacitor and one half bridge.

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